

## CLAIMS

What is claimed is:

1. A method of initiating a handoff between a serving base station and a target base station in a CDMA communication system having a plurality of base stations in communication with at least one mobile station, wherein each base station transmits at least one associated and corresponding pilot channel that uniquely identifies the base station, and wherein the serving base station and the target base station operate in accordance to different generations of CDMA systems, comprising the steps of:
  - a) monitoring a first parameter obtained from the serving base station;
  - b) monitoring a second parameter obtained from the target base station;
  - 10 c) determining if the first parameter is less than or equal to the sum of the second parameter and an offset;
  - d) returning to step (a) if the first parameter is not less than or equal to the sum of the second parameter and the offset; and
  - 15 e) initiating a reverse link handoff between the serving and target base stations if the first parameter is less than or equal to the sum of the second parameter and the offset.
2. The method of initiating a handoff of Claim 1, wherein the offset is zero.
3. The method of initiating a handoff of Claim 1, wherein the offset is based on a Quality of Service (QoS) factor.
4. The method of initiating a handoff of Claim 1, wherein the offset is based on a Frame Error Rate (FER) factor.
5. The method of initiating a handoff of Claim 1, wherein the first parameter is a first  $E_c/I_o$  value associated with the serving base station.

6. The method of initiating a handoff of Claim 5, wherein the second parameter is a second  $E_c/I_o$  value associated with the target base station.
7. The method of initiating a handoff of Claim 6, wherein the step (c) of determining if the first parameter is less than or equal to the sum of the second parameter and an offset comprises the sub-steps of:
- i) determining whether the second  $E_c/I_o$  value is greater than a T\_Add parameter;
  - ii) returning to step (a) of Claim 1 if the second  $E_c/I_o$  value is not greater than the T\_Add parameter;
  - iii) sending a PSMM to the serving base station and adding the target base station to a candidate set if the second  $E_c/I_o$  value is greater than the T\_Add parameter;
  - iv) determining whether the serving base station transmitted an intergenerational handoff direction message to the mobile station;
  - v) returning to step (a) of Claim 1 if the serving base station did not transmit an intergenerational handoff direction message to the mobile station;
  - vi) proceeding to step (d) of Claim 1 if the serving base station transmitted an intergenerational handoff direction message to the mobile station;
  - vii) monitoring the first parameter obtained from the serving base station and the second parameter obtained from the target base station; and
  - viii) determining if the first parameter is less than or equal to the sum of the second parameter and the offset.
8. The method of initiating a handoff of Claim 1, wherein the step (e) of initiating a reverse link handoff is autonomously performed by the mobile station.

9. The method of initiating a handoff of Claim 1, wherein the handoff is an intergenerational soft handoff comprising a forward link soft handoff and a reverse link hard handoff.
10. The method of initiating a handoff of Claim 9, wherein the handoff is autonomously performed by the mobile station.
11. The method of initiating a handoff of Claim 1, wherein the handoff is an intergenerational hard handoff comprising a forward link hard handoff and a reverse link hard handoff.
12. The method of initiating a handoff of Claim 11, wherein the handoff is autonomously performed by the mobile station.

- 5 13. An apparatus for initiating a handoff between a serving base station and a target base station in a CDMA communication system having a plurality of base stations in communication with at least one mobile station, wherein each base station transmits at least one associated and corresponding pilot channel that uniquely identifies the base station, and wherein the serving base station and the target base station operate in accordance to different generations of CDMA systems, comprising:
- 10 a) means for sending a PSMM to the serving base station and adding the target base station to an active set when a first parameter associated with the target base station is greater than a T\_Add threshold parameter; and
- 15 b) means for initiating a reverse link intergenerational hard handoff, wherein the hard handoff initiation means is responsive to the serving base station, and wherein the hard handoff initiation means initiates a reverse link intergenerational hard handoff when the serving base station transmits an intergenerational handoff direction message to the mobile station and when a second parameter associated with the serving base station is less than or equal to a sum of the first parameter and an offset.
14. The apparatus of Claim 13, wherein the first parameter is a target base station  $E_c/I_o$ .
15. The apparatus of Claim 14, wherein the second parameter is a serving base station  $E_c/I_o$ .
16. The apparatus of Claim 15, wherein the offset is zero.
17. The apparatus of Claim 13, wherein the mobile station autonomously performs the reverse link intergenerational hard handoff.

18. The apparatus of Claim 13, wherein the handoff between the serving and target base stations is an intergenerational soft handoff comprising a forward link soft handoff and a reverse link hard handoff.
19. The apparatus of Claim 18, wherein the mobile station autonomously performs the handoff.
20. The apparatus of Claim 13, wherein the handoff between the serving and target base stations is an intergenerational hard handoff comprising a forward link hard handoff and a reverse link hard handoff.
21. The apparatus of Claim 20, wherein the mobile station autonomously performs the handoff.

22. A computer program executable on a general purpose computing device, wherein the program is capable of initiating a reverse link handoff in a CDMA communication system having a plurality of base stations in communication with at least one mobile station, wherein each base station transmits at least one associated and corresponding pilot channel that uniquely identifies the base station, and wherein the serving base station and the target base station operate in accordance to different generations of CDMA systems, comprising:
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- a) a first set of instructions for monitoring a first parameter obtained from the serving base station;
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- b) a second set of instructions for monitoring a second parameter obtained from the target base station;
- c) a third set of instructions for determining if the first parameter is less than or equal to the sum of the second parameter and an offset; and
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- d) a fourth set of instructions for initiating a reverse link handoff between the serving and target base stations if the first parameter is less than or equal to the sum of the second parameter and the offset.